

Original article

Examining the Overlap in Internet Harassment and School Bullying: Implications for School Intervention

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Abstract

Purpose: As more and more youth utilize the Internet, concern about Internet harassment and its consequences for adolescents is growing. This paper examines the potential overlap in online and school harassment, as well as the concurrence of Internet harassment and school behavior problems.

Methods: The Growing Up with Media survey is a national cross-sectional online survey of 1588 youth between the ages of 10 and 15 years old. Our main measures were Internet harassment (i.e., rude or nasty comments, spreading of rumors, threatening or aggressive comments) and school functioning (i.e., academic performance; skipping school; detentions and suspensions; and carrying a weapon to school in the last 30 days).

Results: Although some overlap existed, 64% of youth who were harassed online did not report also being bullied at school. Nonetheless, youth harassed online were significantly more likely to also report two or more detentions or suspensions, and skipping school in the previous year. Especially concerning, youth who reported being targeted by Internet harassment were eight times more likely than all other youth to concurrently report carrying a weapon to school in the past 30 days (odds ratio = 8.0, $p = .002$).

Conclusions: Although the data do not support the assumption that many youth who are harassed online are bullied by the same (or even different) peers at school, findings support the need for professionals working with children and adolescents, especially those working in the schools, to be aware of the possible linkages between school behavior and online harassment for some youth.

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Keywords:

Internet harassment; Bullying; Psychosocial functioning; Victimization; School health

As the Internet has become evermore popular with youth, both potential benefits and risks of the Internet to adolescent health are increasingly being recognized. The Internet offers connectivity to friends and family [1] and access to important information, especially sensitive health topics [2,3]. As with other social environments, however, the potential to meet and interact with others in possibly harmful ways exists. One such interaction of growing concern is Internet harassment [4,5,6]. Defined as “an overt, intentional act of

aggression towards another person online” [7], Internet harassment can take the form of comments directed at the youth, or information or pictures posted online for others to see with the intent to harass or embarrass the youth.

Similar to bullying that occurs face to face [8–12], evidence is emerging that online harassment is associated with concurrent psychosocial problems for some youth [5,7,13–16]. Youth who report being victims of Internet harassment are significantly more likely to concurrently report depressive symptomatology, life challenge, interpersonal victimization (e.g., having something stolen), deficits in social skills, and harassing others online themselves [5,15]. Almost two in five harassed youth (39%) report emotional distress as a result of the experience [5].

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Bullying that occurs face to face is related to school problems. Victims of bullying at school report significantly less positive relationships with classmates [17], and those with multiple victimizations have poorer academic performance [18]. It is possible that, similar to the parallel of psychosocial problems observed for youth harassed online and youth bullied face to face, youth who are harassed online experience school functioning problems that are parallel to those reported by youth bullied at school.

Little is known about how many youth experience harassment both online and at school. Nonetheless, parents often contact school officials demanding that intervention occur if their child is being harassed by another student online. School professionals are wrestling with how to effectively intervene when they become aware of Internet harassment of their students. It is challenging, because the harassment often occurs off school grounds and outside of school time. Previous research suggests possible overlaps. Targets of Internet harassment are more likely to be victimized in face-to-face environments by peers [5,15]. Furthermore, about 50% of targets of Internet harassment in the Youth Internet Safety Survey-2 (YISS-2) reported knowing their harasser in person before the incident; one in four youth reported an aggressive offline contact from their harasser, including being telephoned or visited at home by the aggressor [5]. It seems then, that for some youth who are harassed online, there may be an offline component as well. Findings would help inform school bullying policies as well as provide direction for the content of school antibullying programs.

Using data from the Growing Up with Media survey, a national survey of 1588 youth between the ages of 10 and 15 years, we first report psychosocial characteristics associated with being targeted by Internet harassment to further our understanding of the phenomenology of Internet harassment victims. Next, we address the above identified gaps in our understanding of Internet harassment by examining the following questions: (1) is Internet harassment an extension of school bullying? and (2) aside from overlap in experiences, what is the association between Internet harassment and school functioning and performance indicators?

Methods

Data are from the baseline survey of Growing Up with Media, a longitudinal survey of youth, and the adult in each household most knowledgeable about the child's media use. Data were collected between August and September 2006. The protocol was reviewed and approved by the Centers for Disease Control and Prevention IRB.

Data source sampling method

Adults were randomly identified members of the Harris Poll Online (HPOL), which includes over 4 million members [19]. Members are "opt-in," which requires that each

registrant confirm his or her intention to join the panel by clicking on a link within an e-mail that is sent to the adult's e-mail address upon registering. If the adult clicks on the link within the e-mail, he/she is added to the HPOL. If the adult takes some other action or simply deletes the e-mail, he/she is not added to the database.

When adult HPOL members clicked on the survey invitation e-mail, they were sent to a secure Web site where they completed an eligibility questionnaire. They were asked to provide demographic information about all of the children living in their household. Youth were randomly identified from the list of eligible children provided by the adult, with stratification goals based upon sex and age. Four strata were created: 10–12-year-old boys, 10–12-year-old girls, 13–15-year-old boys, and 13–15-year-old girls. If the randomly identified child fell in a stratum that was not filled, the child was invited to participate in the survey. If the stratum was filled, the computer randomly chose the next eligible child on the household list. If an eligible child could not be identified, the household was not invited to participate. Recruitment among HPOL adult members continued until all four strata of youth participants were filled.

Propensity weighting, a well-established statistical technique, is applied to the data to minimize the issue of non-randomness and establish equivalency for those who are in the sample versus not due to self-selection bias [20–22]. HPOL data are consistently comparable to data that have been obtained from random telephone samples of general populations after sampling and weighting are applied [20,23–25].

Random Digit Dialing (RDD) response rates typically appear higher than online response rates because it is impossible for online surveys to determine if the e-mail has reached the intended recipient's inbox (as opposed to being filtered out by spam filters), and individuals who have not opened their e-mail. The response rate for this online survey was calculated as the number of individuals who started the survey divided by the number of e-mail invitations sent less any e-mail invitations that were returned as undeliverable. The survey response rate, 26%, is within the expected range of well-conducted online surveys [26,27]. Typical efforts to maximize the response rate were taken, including controlling the sample so that e-mail invitations were sent out in waves (as opposed to all at once) and reminder e-mails were sent to nonresponders.

Methods in data collection

Youth participants were required to be 10–15 years old, read English, and have used the Internet in the last 6 months. Caregivers were required to be equally or the most knowledgeable caregiver about the youth's media use. After eligibility was confirmed and consent obtained from the adults, adults completed a 5-minute survey. They then

passed the survey to youth who provided assent and completed the 21-minute survey. Youth were encouraged to return to the survey later if they were not in a separate space where their responses could be kept private from others (including their caregiver). Youth received a \$10 gift certificate and caregivers \$5 for their participation.

Measures

Youth-reported Internet harassment

Because Internet harassment is a relatively new research focus, definitions vary across national surveys. The YISS-2 definition of harassment victimization is based upon two items: feeling worried or threatened because someone was bothering or harassing the youth online, or someone used the Internet to threaten or embarrass the youth by posting or sending messages about the youth for other people to see [4,5]. Nine percent of youth in the 2005 telephone survey endorsed at least one of the items. The survey defines perpetration of harassment as one of two behaviors: using the Internet to harass or embarrass someone the youth is mad at; and making rude or nasty comments to someone on the Internet. Twenty-nine percent of youth responded positively to at least one of the two questions [16]. Although it is uncommon for more youth to report perpetration rather than victimization experiences, this may be reflective of the comparatively shorter and easier to understand questions for perpetration. A recent national telephone survey of adolescents conducted by the Pew Internet & American Life Project defines harassment as: someone taking the youth's private message and forwarding it to someone else or posting it online, having rumors spread about the youth online, receiving a threatening or aggressive message, or someone posting an embarrassing picture of the youth online [28]. Thirty-two percent of respondents endorsed at least one of the four experiences. Finally, a national online survey of young people 8–18 years of age conducted by Harris Interactive for Symantec suggests that as many as 43% of young people have been targeted by Internet harassment [29], although this measure included more than 10 possible experiences (personal communication, Chris Moesner, May 21, 2007).

In the current survey, we use three items (Cronbach's $\alpha = .79$): in the last year, how many times did the youth: (1) receive rude or nasty comments from someone while online; (2) be the target of rumors spread online, whether they were true or not; and (3) receive threatening or aggressive comments while online. The first item was from the YISS-2 [4,5], the second was adapted from an item referring to face-to-face bullying in the Youth Risk Behavior Surveillance survey [30], and the third was created for this survey (although a similar item was fielded separately by the Pew group around the same time). Response options were: everyday/almost everyday, once or twice a week, once or twice a month, a few times a year, less than a few

times a year, and never. Youth who reported any of the three experiences in the previous year were coded as being harassed online. Responses were reduced to three categories to allow for stable statistical analyses: (1) never, (2) infrequently (i.e., one or more of the experiences occurred less frequently than monthly), and (3) frequently (i.e., one or more of the experiences occurred monthly or more frequently).

To understand the impact that harassment may have on youth, those indicating harassment were asked a follow up question [4,5,6]: "Please think about the most serious time someone [incident type] in the last year. How upset did you feel about this experience?" where [incident type] refers to one of the harassments queried. Answers were coded on a 5-point Likert scale (1 = not at all upset, to 5 = extremely upset). Because of an error in the survey, this follow-up question was not asked of youth who reported receiving aggressive or threatening comments.

Overlap between online and offline harassment

Youth who indicated they had experienced at least one of the three harassment types in the previous year were asked a follow-up question: "Do the same people who harass or bully you on the Internet also harass or bully you in school?" Four response options were offered: Yes, the same people harass/bully me at school and online; No, different people harass/bully me at school and online; No, I am not harassed/bullied at school; and I don't know who is harassing/bullying me online.

School-based behaviors and performance

Academic achievement was measured by the question: "What kinds of grades you get in school?" Youth also were asked to quantify the number of times they had detention or were suspended, and ditched or skipped school in the last school year. Weapon carrying was measured by the question: "Thinking about the last month you were in school, on how many days did you carry a weapon, like a gun, knife or club, to school?"

Caregiver–child relationship

Emotional connectedness with caregivers [4] was a summation of three items about the youth's relationship with their caregiver who knew the most about them (Cronbach's $\alpha = .62$; range: 3–14): how well would you say you and this person get along, how often do you feel that this adult trusts you, and how often if you were in trouble or were sad would you discuss it with this person. Monitoring was a summation of two items: how often does the caregiver know where the youth is, and who the youth is with when the caregiver is not home (Cronbach's $\alpha = .81$; range: 2–10). Coercive discipline was a 5-point Likert scale reflecting the frequency with which the caregiver yelled at the youth.

Substance use

Alcohol use was indicated for youth who reported they “had a drink of alcohol, like beer, wine, vodka, other than a few sips without parents’ permission” at least once in the past 12 months. Drug use was indicated if youth reported they had “used an inhalant like whippets, glue, and paints,” or “used any other kind of drug, like speed, heroin or cocaine at least once in the past 12 months.”

Internet harassment of others online was measured by three items mirroring the harassment victimization measure described above (Cronbach’s $\alpha = .82$). For example, “in the last year, how many times did you send rude or nasty comments to someone while online?”

Peer victimization offline

Relational bullying, a form of bullying using social status and interaction, was indicated if youth had either “not let another person your age be in your group anymore because you were mad at them” or “spread a rumor about someone, whether it was true or not” monthly or more often (Cronbach’s $\alpha = .76$). Two items of the Juvenile Victimization Questionnaire [31] also were included. Youth were asked the frequency with which “someone stole something from me—for example, a backpack, wallet, lunch money, book, clothing, running shoes, bike or anything else.” Being attacked was indicated for youth who responded “another person or group attacked me—for example, an attack at home, at someone else’s home, at school, at a store, in a car, on the street, at the movies, at a park or anywhere else.”

Demographic characteristics

Youth reported their race and ethnicity. Caregivers reported youth sex and age, as well as household income. Internet use was reported by the child.

Identifying the sample

Because the current investigation is concerned with overlaps in school and Internet bullying, youth who indicated they were home schooled ($n = 62$) or declined to answer the question ($n = 3$) were dropped from the primary analytic sample. The frequencies of Internet harassment for public/private schooled youth and home schooled youth were compared and reported. Missing data were coded as symptom absent; to reduce the possibility of coding truly nonresponsive respondents, youth were required to have valid data for 85% of the variables of main interest (i.e., school data and Internet harassment). Eight youth (none of whom reported being targeted by Internet harassment) were dropped, leading to a final, primary analytical sample size of 1515.

Statistical analyses

After exploratory analyses were conducted to illuminate basic frequencies, design-based *F*-statistics were used to test

the difference in distribution of a characteristic across three frequencies of Internet harassment: (1) never, (2) infrequently (i.e., less frequently than monthly), and (3) frequently (i.e., monthly or more frequently). *F*-statistics provide a test of independence that accounts for the weighted survey design [32]. All analyses incorporate survey sampling weights and account for a stratified sampling design.

Results

Percentages reported in the text and tables are weighted as described above; numbers reported in tables are unweighted and reflective of the actual sample [32].

Thirty-five percent of youth reported being targeted by at least one of the three forms of Internet harassment queried in the previous year, 8% reported frequent harassment (i.e., being targeted monthly or more often; Table 1). Demographic characteristics of youth respondents are shown in Table 1. Youth who were targeted by Internet harassment tended to be older ($p < .001$) and were less likely to be male ($p < .05$).

Comparisons of psychosocial characteristics of youth based upon their reported experience with Internet harassment are shown in Table 2. For all characteristics examined, the report of psychosocial problems was related to significantly elevated odds of also reporting being targeted by frequent Internet harassment.

Overlap between Internet harassment and school bullying

Youth who reported being harassed online were asked follow-up questions to understand their school bullying experiences. As shown in Table 3, among youth harassed online, the majority (64%) reported not being harassed or bullied at school. More youth who were frequently (i.e., monthly or more often) compared to infrequently (i.e., less frequently than monthly) harassed online also reported being bullied at school.

As shown in Figure 1, almost half of youth who reported receiving rude or nasty comments, or rumors spread about them online by the same people as those who harassed or bullied them at school reported distress by the Internet incident. In contrast, less than 20% of youth targeted online with different or no overlapping harassment or bullying at school reported being distressed by the online incident ($p = .001$).

Another analysis to illuminate the research question is to examine the rates of harassment for youth who were home schooled versus youth who were private/public schooled. If Internet harassment were an extension of school-based bullying, rates for those who were home schooled would be lower. This subsequent analysis of the entire sample ($n = 1588$) suggested trends toward lower rates of Internet harassment for home-schooled youth, although these differences were not statistically significant: 26% of public/private-schooled youth reported infrequent Internet harassment

Table 1
Growing Up with Media household characteristics (n = 1515)

Youth characteristics	All youth n = 1515	Frequency of being harassed online			p-value
		No harassment 65% (n = 1026)	Infrequent harassment 26% (374)	Frequent harassment 8% (115)	
Report of Internet harassment					
Rude or nasty comments	31.5% (444)	68.5% (1071)	24.2% (340)	7.3% (104)	NA
Rumors spread about youth	13.2% (197)	86.8% (1318)	10.7% (162)	2.5% (35)	NA
Threatening or aggressive comments	14.1% (184)	85.9% (1331)	10.5% (136)	3.6% (48)	NA
Demographic characteristics					
Age (M:SE)	12.6 (0.05)	12.2 (.07)	13.4 (.10)	13.2 (.19)	<.001
Male	52.4 (761)	55.7% (543)	45.0% (163)	49.2% (55)	.04
Race					.01
White	71.2% (1112)	66.5% (720)	80.2% (297)	80.3% (95)	
Black	12.9% (202)	15.4% (158)	7.5% (36)	10.4% (8)	
Mixed race	8.8% (109)	10.4% (82)	5.9% (20)	4.8% (7)	
All others	7.1% (92)	7.7% (66)	6.4% (21)	4.6% (5)	
Hispanic ethnicity	18.4% (196)	20.7% (14)	15.6% (46)	8.7% (9)	.04
Household income					.008
<35,000	22.3% (374)	24.7% (267)	15.9% (76)	23.8% (31)	
35,000–99,999	56.3% (894)	57.6% (605)	55.1% (224)	49.8% (65)	
100,000+	21.4% (247)	17.7% (154)	29.0% (74)	26.4% (19)	
School characteristics					
Private school	7.3% (147)	8.3% (105)	5.4% (28)	6.4% (14)	.28
Grade (Mean: SE)	5.5 (0.05)	5.1 (.07)	6.4 (.10)	6.1 (.20)	<.001
Internet use					
Frequent use (7 days/week)	34.7% (509)	24.8% (252)	53.5% (192)	53.3% (65)	<.001
Intense use (2+ hours/day)	21.0% (310)	13.3% (139)	34.7% (122)	39.0% (49)	<.001

NA = not applicable.

compared with 16% of home-schooled youth; 8% of public/private-schooled youth reported frequent harassment as did 6% of home-schooled youth ($p = .25$).

School-based correlates

As shown in Table 4, detentions and suspensions, ditching or skipping school, and weapon carrying were each more frequently reported by youth who also reported being harassed online. Differences between youth were especially apparent for weapon carrying; youth reporting being targeted by Internet harassment were eight times as likely to concurrently report carrying a weapon to school in the last 30 days compared to all other youth (odds ratio [OR]: 8.4, $p = .001$). This association was not due to underlying differences in youth sex, age, race, ethnicity, household income, or internet use (adjusted OR: 12.7, $p < .001$). Subsequent analysis of the type of Internet harassment experienced indicated that 27% of youth targeted by rumors and 21% of youth targeted by threats monthly or more often online also reported carried a weapon to school at least once in the previous 30 days.

Discussion

One in three (34.5%) youth in the Growing Up with Media survey, conducted among youth between the ages of 10 and 15 years attending private and public schools in the

United States, report at least one incident of Internet harassment in the previous year; 8% report frequent harassment occurring monthly or more often. Little overlap in school harassment is reported for youth who are harassed online. Nonetheless, school behavior problems including ditching or skipping school, weapon carrying, and detentions and suspensions are significantly more frequently reported by youth harassed online. Internet harassment appears to be an important adolescent health issue with implications for school health specifically.

Internet harassment and school functioning

Online harassment—especially frequent harassment occurring monthly or more often—appears to be related to increased reports of behavior problems and weapon carrying at school (Table 4). Especially concerning is the finding that one in four youth frequently targeted by rumors and one in five youth frequently targeted by threats online also report having carried a weapon to school at least once in the previous 30 days. It cannot be determined why youth brought a weapon to school; it is possible that the decision was unrelated to their experience online. The consistently higher frequency of reported school behavior problems by youth involved in Internet harassment suggests that youth who are being harassed online—especially frequently—are also likely expressing concerning behavior problems at school. Findings are consistent with Ybarra and colleagues

Table 2
Psychosocial characteristics related to Internet harassment (n = 1515)

Psychosocial characteristics	No harassment (66.5%, n = 1026)	Infrequent harassment (26%, n = 374)		Frequent harassment (n = 8%, 115)	
	%(n)	%(n)	AOR (95% CI)	%(n)	AOR (95% CI)
Caregiver–child relationships*					
Emotional bond (M:SE)	5.3 (.09)	5.7 (.15)	1.1 (1.0, 1.2)	6.4 (.22)	1.3 (1.1, 1.4)***
Monitoring (M:SE)	2.8 (.06)	3.1 (.09)	1.2 (1.0, 1.4)*	3.5 (.21)	1.5 (1.2, 1.8)***
Coercive discipline (M:SE)	2.6 (.04)	2.6 (.06)	1.1 (0.8, 1.4)	2.9 (0.11)	1.6 (1.1, 2.2)*
Substance use					
Alcohol use	5.7% (61)	21.3% (75)	3.5 (2.0, 6.1)***	39.5% (39)	9.4 (4.7, 18.8)***
Other drugs (inhalants, stimulants)	0.8% (13)	2.2% (6)	1.8 (0.4, 6.9)	11.4% (8)	10.3 (3.0, 35.2)***
Harassing others online					
Never	94.5% (975)	54.8% (194)	1.0 (Reference group)	31.1% (38)	1.0 (Reference)
Infrequently	4.1% (43)	42.5% (172)	17.5 (9.9, 30.8)***	42.9% (45)	36.2 (15.8, 83.0)***
Frequently	1.3% (8)	2.7% (8)	3.1 (0.8, 12.7)	26.1% (32)	95.9 (31.2, 294.7)***
Victimization offline					
Being the target of relational bullying					
Never	43.9% (418)	13.9% (48)	1.0 (Reference group)	8.6% (8)	1.0 (Reference)
Infrequently	44.1% (483)	71.6% (279)	6.0 (3.5, 10.1)***	44.3% (47)	5.6 (1.8, 17.2)**
Frequently	12.1% (125)	14.5% (47)	5.3 (2.6, 10.6)***	47.1% (60)	26.3 (8.5, 81.4)***
Having something stolen by someone					
Never	62.5% (659)	42.5% (163)	1.0 (Reference group)	35.6% (37)	1.0 (Reference)
Infrequently	34.4% (343)	55.6% (202)	2.4 (1.6, 3.6)***	45.2% (58)	2.3 (1.2, 4.4)**
Frequently	3.1% (24)	1.9% (9)	1.2 (0.4, 3.3)	19.2% (20)	17.3 (7.0, 43.0)***
Being attacked by another person or group (at least once)	10.3% (105)	15.8% (63)	2.3 (1.4, 4.0)**	49.5% (51)	14.5 (7.7, 27.2)***

AOR = adjusted odds ratio; estimates are adjusted for youth sex, race, ethnicity, Internet use, private versus public school, grade in school, and household income

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

(under review), who report that youth who receive rude or nasty comments via text messaging are significantly more likely to also report feeling unsafe at school. This emerging evidence that technology-based harassment is related to school behavior problems supports the need for parents and school personnel (as well as law enforcement if the situation warrants it) to together intervene and introduce consequences for youth identified as technology-based harassers. Even if the harassment is not taking place on school grounds, Internet harassment is concurrently related to behavior problems at school at least for some youth. A team effort is certainly required, however, and principals should not be expected to act in isolation. Often principals do not have access to children's e-mails, and are unable to verify who sent or posted the information. Parents must take responsibility for intervening as well.

Overlap between Internet harassment and school bullying

Although some overlap exists, it appears that 64% of youth who are harassed online are not also being harassed or bullied at school (Table 3). Moreover, the rate of Internet harassment is similar for youth who are home schooled and youth who are schooled in public/private schools, suggesting that it is not always an extension of school bullying. These findings are consistent with recent reports that less than two in five youth who are harassed via text messaging also are harassed at school (Ybarra, Espelage, Martin, under review). It is possible that, although there are similarities in characteristics of youth who are bullied offline and harassed online, we may nonetheless be looking at different groups of young people in some cases. The Internet and other new

Table 3
Overlap between online and offline harassment and bullying (n = 476^a)

Reported overlap	All harassed youth n = 476	Infrequent harassment n = 368	Frequent harassment n = 108
Yes, same people online and offline	12.6% (75)	11.1% (50)	17.9% (25)
No, different people online and offline	10.4% (50)	9.1% (33)	14.7% (17)
No, not bullied at school	64.1% (283)	66.8% (233)	54.8% (50)
Don't know whose harassing me online	12.9% (68)	13.0% (52)	12.6% (16)

Distribution of reports among infrequent versus frequent harassment is not statistically significantly different $F(2.9, 1388.1) = 1.6, p = .20$.

^a Thirteen youth who were harassed online declined to answer.

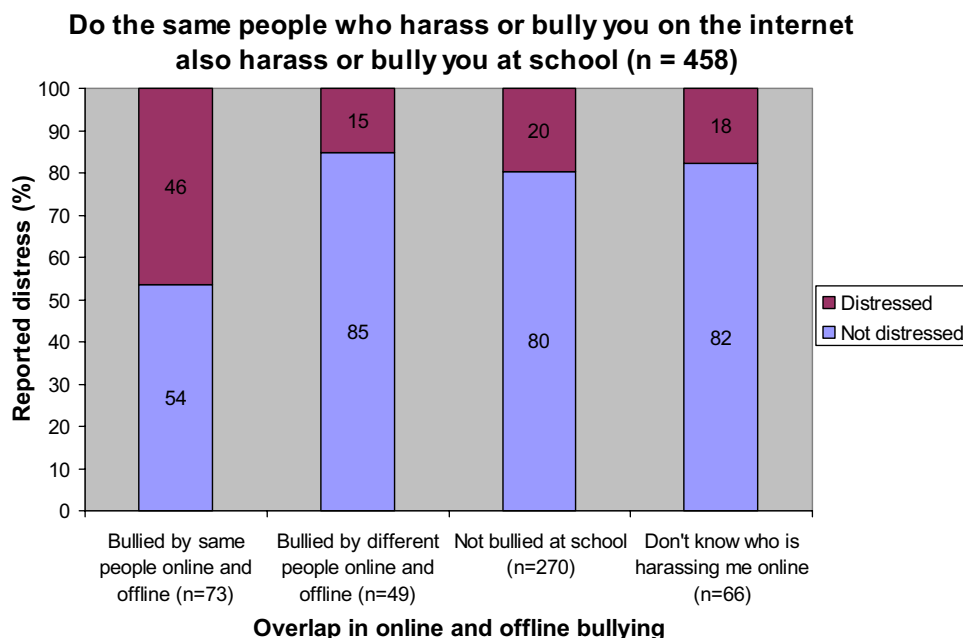


Figure 1. Report of distress because of Internet harassment by overlap in school bullying ($F [2.9, 13, 3.6] = 5.3; p = .001$). Twelve youth declined to answer the question about distress. Distress was only asked of youth who reported rude or nasty comments, or rumors spread about them online. Youth reporting only aggressive or threatening comments online ($n = 19$) were not included.

technologies may have increased the chances for harassment for youth who might otherwise not be targeted. Further investigation is warranted.

Half of youth who are targeted by rude or nasty comments or rumors online by the same people who harass or bully them at school report distress because of the Internet harassment experience. This is the highest rate of distress among youth who report being harassed online in the past year (Figure 1). It may be that these youth feel overwhelmed and unable to escape peer victimization. They are being targeted in the two places where youth spend a lot of their time. School professionals should be especially concerned about youth who report overlaps in bullying online and at school by the same student and be empowered to intervene.

An important minority of youth who are harassed online (13%) report not personally knowing the harasser (Table 3). This may be an important aspect of power in the online harassment experience [7]; by withholding one's identity, the aggressor potentially has the upper hand in online com-

munications. It also points to a differential challenge inherent in online versus offline harassment. Unlike the school yard, some children, albeit a minority, are involved in a new type of harassment in which the "bully" is not seen. Professionals working with children must ensure that they understand the specific details of the harassment experience and help the youth identify a protective plan that is tailored to the aspects of his or her harassment. It should be noted that the data do not allow the determination whether these youth who report not knowing their harasser online also are harassed at school (see *Measures* for response options). It is possible that these youth are harassed and bullied at school; it is equally possible that they are not.

Additional correlates of Internet harassment

Consistent with previous research [5,7,15] youth who are harassed online report a mix of psychosocial problems (Table 2). They are significantly more likely to be targeted

Table 4
Associations between Internet harassment and school indicators ($n = 1515$)

School characteristics	Frequency of Internet harassment			p-value
	No harassment n = 1026	Infrequent harassment n = 374	Frequent harassment n = 115	
Detentions & Suspensions (2+ vs. 1 or 2)	10.7% (102)	19.5% (59)	21.3% (29)	.004
Poor academic performance (Cs or poorer)	8.7% (93)	7.5% (34)	14.1% (18)	.29
Ditched or skipped school (ever in the last year)	4.3% (38)	12.0% (47)	32.7% (35)	<.001
Carried a weapon to school in last 30 days	0.6% (5)	2.3% (6)	12.9% (13)	<.001

by victimization offline (e.g., relational bullying, having something stolen). Furthermore, the increasing frequency of being targeted by Internet harassment is associated with poorer parental monitoring and caregiver–child emotional bond. This has two implications. First, parent-targeted intervention messages are necessary but insufficient Internet safety measures. Additional intervention targets, including teachers and youth themselves, should be included to ensure that all potential influencers of youth behavior receive the needed safety messages. Second, professionals working with youth should be aware that relying on parent intervention or support in a case of Internet harassment may not always be the most effective choice. In some cases, youth will not feel comfortable disclosing the experience to their parents. Instead of making this a requirement for support, professionals working with young people should have an adult network identified to whom they can refer such children for unthreatening support.

Externalizing behaviors also are noted in elevated rates among youth harassed online, including alcohol use and other drug use. Based upon previous research [7], it is likely that these behaviors are reflective of aggressor–victims, youth who are harassed and harass others online. This is supported by the finding that youth who are harassed online are significantly more likely to also report harassing others in the current sample. Some youth involved in Internet harassment may be “global–victims,” vulnerable to victimization in multiple environments, whereas others maybe more reflective of bully–victims. Given the negative health consequences noted for both types of youth [7], intervention is needed.

Limitations

Findings should be interpreted within the study’s limitations. First, the cross-sectional data preclude temporal inferences. We cannot say that being harassed online caused youth to bring weapons to school, or vice versa. Nor can we say that bringing a weapon to school is even directly related to being harassed online. Additionally, because of an error in the survey, distress related to being targeted by threatening or aggressive comments online was not measured. Of the 184 youth reporting this type of Internet harassment, 165 also reported another type of Internet harassment; the remaining 19 reported being targeted by aggressive or threatening comments only. Thus, although this type of harassment is not included in the measure of distress (Figure 1), the majority of youth are included in the analysis through the other type of harassment they experienced. It is possible that threatening or aggressive comments are more distressing than the other two types of harassment queried. If so, the reported distress rates are an underestimate of the true rate. The current rates are consistent with previous reports of distress related to Internet harassment [4,5,6]. Also, findings are relevant to youth in traditional school settings. Whether

other youth (e.g., home schooled) are more or less likely to be harassed and bullied online and offline in nonschool environments by the same (or different) people is not known. Finally, the definition of Internet harassment has not yet been established. As such, prevalence rates should be compared to other studies of Internet harassment only within the context of acknowledged differences in definition, frequency, and time frame.

Future research directions

Several areas of future research arise. The current data are not able to illuminate the percentage of youth who are harassed online among those who are bullied or harassed at school. It is possible that from the mirror perspective—that is, among youth who are bullied at school, the number of youth who also are harassed online—a more complete overlap would be observed. Perhaps the majority of youth who are bullied at school also are harassed online and that there is another group of youth who are harassed online but not bullied at school. It also is possible that youth are being harassed and bullied in additional environments, including the community, text messaging, etc. An important area of future research will be to examine potential overlaps in harassment and bullying across all possible environments to gain a fuller picture of the youth’s experience. As schools begin to integrate anti-Internet harassment topics into their antibullying curriculum, it also will be important to evaluate the impact that it has on reducing Internet harassment, as well as bullying that spans multiple environments.

Conclusion

Current findings reveal concerning school behavior problems for youth who are harassed online. Data do not support the assumption, however, that many youth who are harassed online are bullied by the same (or even different) peers at school. Professionals working with children and adolescents, especially those working in the schools, should be aware of the possible linkages between school behavior problems and online harassment for some youth. Youth targeted by the same people online and offline are most likely to report distress because of the online incident and should be paid special attention.

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